

IN THE CLAIMS

1. (Currently Amended) A method to prill a shear-thinnable mixture comprising the steps of:
  - a) providing a molten first component;
  - b) mixing at least a second component with said molten first component;
  - c) reacting said components at a temperature and for a time sufficient to form a shear-thinnable mixture having a viscosity, whereby the viscosity decreases with increased shear rate;
  - d) mechanically agitating said shear-thinnable mixture ~~at a rotational speed of greater than about 200 revolutions per minute by means of~~ by an agitator in a prill head, wherein essentially the entire liquid volume in said prill head is swept by said agitator to shear thin said shear-thinnable mixture; and permitting said shear-thinned mixture to flow through holes in said prill head under the influence of a force selected from the group consisting of static pressure and centrifugal force.
2. (Original) The method according to claim 1 wherein said shear-thinnable mixture is a melt slurry.
3. (Original) The method according to claim 1 wherein said first component is ammonium nitrate and said second component is ammonium sulfate.
4. (Original) The method according to claim 1 wherein said shear-thinnable mixture comprises no more than about 2 weight percent water.
5. (Original) The method according to claim 3 wherein said shear-thinnable mixture further comprises micronutrients.

6. (Original) The method according to claim 1 wherein said prill head is one of a rotating bucket with a stationary blade, a stationary bucket with rotating scrappers and blades, and an agitated pressurized nozzle assembly.
7. (Previously Presented) The method according to claim 1 wherein said prill head is wiped with surface-wiping blades.
8. (Original) The method according to claim 7 wherein said first component is ammonium nitrate and said second component is ammonium sulfate.
9. (Original) The method according to claim 7 wherein said shear-thinnable mixture comprises no more than about 2 weight percent water.
10. (Original) The method according to claim 7 wherein said shear-thinnable mixture further comprises micronutrients.

Claims 11-14: Cancelled.

15. (Previously Presented) The prilling method according to either claim 3 or claim 8, wherein the reaction time is about 10 minutes to about 15 minutes.
16. (Previously Presented) The prilling method according to either claim 3 or claim 8, wherein the reaction temperature is at least about 180°C to about 200°C.
17. (Previously Presented) The prilling method according to either claim 3 or claim 8, wherein the ammonium nitrate and the ammonium sulfate are present in equimolar amounts.